EXHIBIT 4
DATE Feb 5, 09
HB 10

Business case analysis:
Building Codes One-stop ePermit System
A statewide regulatory streamlining initiative

Overview Summary

Montana Department of Labor and Industry
Business Standards Division
Building Codes Bureau

OVERVIEW SUMMARY

The Montana Department of Labor and Industry (DLI) - Building Codes Bureau (BCB) has initiated an internal business process analysis and system requirement evaluation to provide business and technical services related to a comprehensive statewide data management and e-permitting system.

This executive summary is an overview of our analysis and recommendations. Our report findings indicate:

1. A commercial off-the-shelf system (COTS) is feasible and could be implemented at the state level. Other potential software solutions are not viable options for the BCB at this time.
2. Many benefits could be realized by implementing a state-wide system that may incorporate the option of including local government jurisdictions.
3. Those local jurisdictions that don't participate directly in the proposed system could upload raw data into the proposed system to facilitate BCB reporting and auditing requirements.

The purpose of the internal business analysis effort is to:

- Determine the current customer service, plan review, permitting, and inspection-tracking requirements and capabilities in Montana;
- Revise and enhance procedures and processes to capitalize on current available technologies and market place requirements;
- Create work flow process map models/process diagrams to depict business functions including: permit issuance, plan review, field inspections, enforcement actions, and project closure;
- Analyze and describe potential e-permitting software options for a statewide system to address these requirements;
- Delineate the pros and cons of the various viable options;
- Identify the option that most effectively meets the needs of the state (and possibly local jurisdictions);
- Provide an overview of the project plan for implementing the recommended option.

Work Flow Process Map Models and Diagrams

The team held several meetings to discuss and document business functions (present and future). This analysis resulted in the creation of nine work flow diagrams:

1. Walk-in Permit Application Process
2. Mail-in Permit Application Process
3. Web Permit Application Process
4. Discovery Process
5. Field Issue Permit Process
6. Plan Review Process
7. Field Inspection Process
8. Enforcement Process
9. Job Closure Process

Methodology

The team inventoried and assessed current technologies in use within Montana and also those technologies and business process flows used by other state and local jurisdictions that have comprehensive and contemporary systems established or currently in development.

Current Montana Technologies
BCB staff contacted local jurisdictions in an attempt to inventory current systems and practices. At a high level, the informal survey results indicate that many jurisdictions don't have the functionality that could be provided by a statewide e-permitting system and many believe these features would be useful to their constituents as well as enhance their business processes and the reporting functions required by the State.

Of the 46 local jurisdictions in Montana thirteen have indicated a desire to further investigate the potential to participate in the proposed state system. Seven have declined as they either have a working system or don't have the time or resources to participate. The remainder of the local jurisdictions would like to be kept in the loop regarding development activities. Many smaller jurisdictions still use paper based systems to track permits.

Other Jurisdiction Technologies
Data has been gathered from other jurisdictions outside of Montana that are currently involved in similar e-permitting and business management initiatives. Of the jurisdictions surveyed all are either currently using or are planning on implementing one of the following three COTS vendors: Accela, Amanda (Infor) or CSDC-Hanson. These three vendors specialize in permit management software as well as various modules including GIS functions, web-enabled sale and tracking of permits and wireless functionality for field personnel.

Evaluation of Software Solutions
An evaluation of comprehensive software solutions usually includes several options (including the aforementioned COTS). These other avenues are typically:

- **Public/Private** software development partnership;
  --Communication with the State of Montana e-commerce partners (Montana Interactive-MI) have resulted in MI being informed of our intention to conduct the Business Analysis and providing MI with the opportunity to respond to a potential Request for Proposal (RFP) should it be issued by the Department.

- **Transfer system** from another multi-jurisdictional agency;
  --This potential solution has been explored and subsequently discarded as each of the contemporary solutions implemented in jurisdictions the BCB would wish to emulate involves the inclusion of one of the potential COTS solutions.

- **Extension of open source** technology within the State of Montana was found to be a non-viable option within Montana. The project team was unable to locate an active "e-permitting" open source project or open source established community within Montana.

- **Internal custom built application** – this option is not being evaluated as DLI-Business Standards Division IT resources are very limited. Taking on this type of project would require significant changes in resources, skills, capabilities and staff (FTE).

Benefits

- Utilize ePass Montana - This initiative will support state goals by utilizing ePass Montana, a state sponsored, enterprise-wide initiative to improve overall security, accessibility, administrative functions and public trust of eGovernment services.

- Enhance the ability to protect the health and safety of the public, employees, and prospective building owners in the state by enforcing, adopting and conveying appropriate minimum building codes to promote construction of safe, energy efficient and accessible buildings and building components.

- Provide prompt, effective and efficient service to building owners, design professionals,

contractors and trade persons by enhancing the ability to review and approve building plans within two weeks and issue basic plumbing, mechanical and electrical permits online immediately.

- Promote efficient and prompt interpretation, enforcement, and application of codes and standards to the public, design professionals, builders and contractors, manufacturers and suppliers, and others associated with the built environment in a uniform and continuous manner assuring a seamless process throughout the state and local jurisdictions.

- Enhance the reporting of code deficiencies and enforcement issues in a comprehensive manner to include timely notifications, structured, familiar formatting of notices and reports, effective distribution to all interested and necessary parties, improving feedback and responses from those parties through a quick and inclusive method and developing a process of reporting and measuring progress as related to enforcement service goals.

- Present continuous access to applicants and permit holders to all pertinent information and current progress of their project as related to their role in the process including all information related to application, plan review, document submittals, inspection progression, enforcement actions and project close-out document generation.

- Incorporate electronic data management services (EDMS) functions into all facets of the workflow processes within BCB. The State uses FileNET for this purpose and the timing of this initiative would allow contemporary data management tools to be integrated throughout the process.

- Incorporate the ability to spatially identify construction projects that are qualified as being located in a wildland-urban interface and as a result include the capability to apply specific code standards of the International Code Council (ICC) to these projects.

Challenges

- **Funding Methods** – The current method of funding the building-related permitting functions would potentially satisfy the state portion of the proposed system. Inclusion of local certified jurisdictions may require alternative funding mechanisms and reevaluation of local processes.

- **Process Re-Engineering** – The BCB makes implementation of an e-permitting system possible by creating an environment in which the Bureau standardizes processes and procedures. Implementation of the statewide system requires development of a set of standard business rules and processes that are sophisticated and flexible enough to support the statewide solution.

- **Plan Review Implementation** – Architects, engineers, and designers use various types of software to draw, review and transmit plans. Implementation of a plan review component may require a standardization of software tools or development of a platform that would allow interoperability of current systems. Internal hardware may need to be enhanced to include larger monitors to enable plan reviewers to view electronically submitted documents.

- **General Implementation Challenges** - Implementation of this proposed system will face many of the same challenges faced by any complex software implementation. Most significantly are inclusion and conversion of legacy data (where required), integration with other software systems including Business Standards Professional Licensing Database, SABHRES, FileNET, etc., and purchasing and upgrading hardware and training for office and field staff.

Factor	Score	Problem	Counter Measure	Risk Score
Environment				
Are all needed development tools in place? Answer: Y/N	Y	Required tools unavailable.	Review tools and associated justification. Evaluate other productivity areas.	0
Is this a new or unfamiliar technology or application? Answer: Y/N	N	Time required for learning curve during development.	Conduct training. Recruit experienced staff. Obtain vendor support.	0
Is the development team for this technology and /or application stable? Answer: Y/N	Y	Lost information. Time required for handover.	Document in standard format as project progresses. Increase attendance at reviews to spread knowledge.	0
Does the development team have a good understanding of the business area? Answer: Y/N	Y	Increased reliance on users.	Increased user participation. Increase frequency and formality of reviews.	0
Rate the Project Team's skill level. A - Experts B - Some Experience C - Will Need Training	A	If the balance of expertise is low, then there is an increased risk of defects.	Increase the frequency of Quality Assurance Reviews and Project Checkpoints. Include experienced staff as specialized technical support. Account for experience levels when planning.	0
Will the development team be utilizing established development methods and standards? Answer: Y/N	Y	Project team does not know what to do. Tasks may be duplicated or omitted.	Implement a standard approach to development, ensure staff familiarity.	0
Project				
What is the level of complexity of the needed functions? 1 - Low 2 - Moderate 3 - High	2	Increased risk of defects.	Increase effort in Logical Design to validate. Increase level of reviews. Use formal techniques.	0
What is the level of complexity of the database? 1 - Low 2 - Moderate 3 - High	2	Performance problems.	Increase data validation steps throughout. Ensure thorough Physical Design Tuning. Increase DBA involvement.	0
Is the database to be shared by more than one application? Answer: Y/N	N	Difficult to tune successfully in Physical Design.	Attempt to establish overall volumes and requirements. Keep design flexible.	3
What is the total number of physical system interfaces? A - Less than 3 B - Greater than 3	B	Increase risks of systems failure.	Increase time in defining interfaces in detail. Involve experts from associated systems.	3
Are the technical specifications clearly defined? Answer: Y/N	N	Rework may be necessary as systems may not meet users' needs.	Increase user involvement.	3

Factor	Score	Problem	Counter Measure	Risk Score
What percentage of the design decisions are being left to the System Architects discretion? A - 0 to 25% B - 25% to 60% C - Greater than 60%	A	Rework may be necessary as system may not meet user's needs	Increase user involvement.	0
Is a Comercial Off the Shelf (COTs) solution avaliable? Answer: Y/N	Y	Effort required in design, construction and testing.	Ensure buy/build option is appropriately conducted.	0
If using a COTs solution to be used, was the solution evaluated and selected, based upon detailed specifications and requirements? Answer: Y/N	Y	Mismatch likely.	Carry out evaluation if cost justified.	0
If using a COTs solution, will modifications be required? A - No, No mods required B - Yes, less than 5% mods. C - Yes, about 5 - 15% mods. D - Yes, more than 15% mods.	B	Required information may be difficult to obtain, or not supported.	Contract vendor to do changes. Evaluate alternative solutions. Minimize changes to front/back ends.	0
Does the solution require a complex on-line network? Answer: Y/N	Y	Increased risk of technical problems (incompatibility, etc.)	Add activities to prototype the on-line architecture. Involve technical experts in physical design stage.	3
Is there a requirement for multi-level hardware? Answer: Y/N	Y	Interfaces, data distribution.	Separate technical feasibility project started early. Ensure availability of required skills.	0
Operational				
Is hardware being used, upward compatible? Answer: Y/N	Y	Hardware constraints will increase problems in physical design and implementation.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	0
Must application and/or environment have 24hour avaliability? Answer: Y/N	Y	Tight timing constraints will increase problems in physical design and construction.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	3
Is there a Rapid Response Time requirement for this application and/or the environment (RRT = below 2 seconds)? Answer: Y/N	N	Tight timing constraints will increase problems in physical design and construction.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	0
Is there a small batch window issue for this delivery? Answer: Y/N	N	Tight timing constraints will increase problems in physical design and construction.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	0
Application and/or environment requires High volume through-put? Answer: Y/N	Y	Tighter performance constraints will increase problems in physical design and construction.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	3

Factor	Score	Problem	Counter Measure	Risk Score
Will this project utilize a very large data base? Answer: Y/N	Y	Performance and storage constraints will increase problems in physical design and construction.	Increase time scheduled for designing the database and for storage and performance predictions. Involve technical experts in physical design stage.	3
Is this delivery exposed to a short recovery cycle? Answer: Y/N	N	Tighter recovery constraints will increase problems in physical design and construction.	Increase time scheduled for physical design and construction stages. Involve technical experts in physical design stage.	0
			Worksheet Total	9
			Risk Factor	**Low**

The list of stakeholders and interested parties that were identified by the work group are:

- Design Profession Community
  - Architects
  - Engineers
- Building Construction Community
  - Builders (Home Builders)
  - Contractors (General Contractors)
  - Building Associations
    - Montana Building Industry Association (MBIA)
      - Local and Regional Building Industry Associations
  - Sub-Contractors and Trades
    - Plumbers
    - Electricians
    - Mechanical Contractors
- Fire Officials Community
  - State Fire Marshall's Office
  - Local Fire Officials
  - Various Fire Officials Associations
    - Montana State Fire Chief's Association
    - Montana State Fire Wardens Association
- Building Code Officials
  - Local Certified Jurisdictions
  - Montana Chapter of the International Code Council
  - Other State Jurisdictions Officials
- Advisory Councils
  - Governor's Building Codes Advisory Council
- Other State and Local Agencies
  - Dept. of Revenue – Liquor Licensing Division
  - Dept. of Public Health and Human Services – Public Lodging and Food and Consumer Safety
  - Individual County and City Governments
- Other Private Entities
  - Private Building Inspectors
    - American Society of Home Inspectors
      - Rocky Mountain Chapter
- Members of the Stakeholder Public
  - Public Members of Trade and Licensing Boards
  - Current and Previous Permit Applicants

Most every stakeholder group listed has been met with in conjunction with this development project. Some information from listed stakeholders has been gleaned over a period of time as the Bureau has interacted with that group, for example, information gleaned from Permit Applicants has been derived over a period of time and has been summarized for inclusion into the project. The work recognizes the importance of including all interested parties and will continue to seek input from the groups listed and others that are determined to have a stake in this project. The work group also recognizes the dynamic nature of our regulatory business with changes in codes, practices, materials, methods, and standards demanding that the work flows and processes integrated into the project be as dynamic in their ability to respond to those changes. For this reason the work group plans to maintain this list of stakeholders and interested parties for the purposes of having regular input and feedback to changes that arise in the design-build-code enforcement arena.